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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,855	11/13/2003	Hiroyuki Sugimoto	Q77877	4878

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EXAMINER

ASINOVSKY, OLGA

ART UNIT PAPER NUMBER

1711

DATE MAILED: 07/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/705,855

Applicant(s)

SUGIMOTO, HIROYUKI

Examiner

Olga Asinovsky

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— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED, STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
- 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
- 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

There is no amendment to present claims 1-6.

Response to Arguments

1. The argument is that Sugimoto does not disclose the powder having an average particle diameter of from 200 to 350 microns, and a content of powder having a particle diameter of not more than 150 microns in the range of not more than 25 wt.% based on 100 % by weight of powder. The particle size of the resulting polymer powder is 500 micron in Sugimoto invention. Also, other argument is that Sugimoto discloses cooling the granule to -120 C., whereas the present claim 5 requires pulverization at a temperature of from -72 to -88 C.

2. Applicant's arguments, see Remarks, pages 2-3, filed May 10, 2006, with respect to particles size and pulverization temperature have been fully considered and are persuasive. The rejection of claims 1-6 under 102/103 over Sugimoto et al U.S. Patent 6,316,090 of the office action mailed on 03/15/2006 has been withdrawn.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugimoto et al U.S. Patent 6,316,090 in view of JP 07096532.

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The rejection has been set at pages 2-4 of the office action mailed on 03/15/2006 and it is incorporated here by references.

Sugimoto discloses a thermoplastic elastomer composition comprising a polyolefin resin and a rubbery polymer, and an ethylene-alpha-olefin copolymer rubber. The rubbery polymer can be a hydrogenated diene polymer rubber or a hydrogenated butadiene-styrene copolymer rubber, col. 3, lines 4-18 and 38-43, for the present claims 2. The MFR for the rubbery polymer is preferably at least 10 g/10 min, col. 4, lines 11-12. The MFR for the polyolefin resin is in the range of 20 to 300 g/10 min, col. 2, lines 64-66.

Therefore, upon melt mixing the ingredients the resulting thermoplastic elastomer composition will inherently have a melt flow rate of not less than 10 g/10 min, for the present claim 1. The ethylene-alpha-olefin copolymer rubber is preferably crosslinked, col. 5, line 18-19. Therefore, depending on the crosslinking effect, an hardness of the ethylene-alpha-olefin is readable in the present claim 2 (iii). The formulation of the thermoplastic elastomer composition is readable in the present claims. The resulting thermoplastic elastomer composition can be produced into a pellet form, thereafter the granule was cooled and then pulverized in the powder form giving 500 micron, col. 7, lines 20-39 and col. 13, lines 61-65. The process for producing a powder thermoplastic elastomer in Sugimoto invention is readable in the present claim 5.

The difference between the present claims and Sugimoto is that Sugimoto does not disclose a particle size of the powder in the range of 200 to 350 microns and a fine particle diameter of not more than 150 microns contained in the powder in the amount

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of not more than 25 wt.% in the present claim 1 or 10 microns in the present claim 4.

Also, the difference is that in the method of producing a powder molding material in the present claim 5 Sugimoto discloses that granule was cooled to -120°C , whereas the present claim 5 requires pulverizing the cooled pellet in a mill having an inner temperature of from -72 to -88°C .

Sugimoto discloses the same chemical formulation for a powder molding material.

Sugimoto discloses the same method for producing the pulverized thermoplastic elastomer composition.

However, it is reasonable to presume that the claimed properties (particle size) would be easily obtained because Sugimoto discloses the same ingredients and the same process by freezing pulverization for obtaining the powder of the resulting thermoplastic elastomer composition.

JP 07096532 discloses the analogous thermoplastic elastomer composition such that the species of a chemical formulation thermoplastic elastomer are readable in Sugimoto invention. The resulting powder polymer material is passing through a standard sieve of 40 to 80 meshes, especially 60-80 meshes, page 7 and page 10; it is equivalent to 40 mesh=350 microns; 60 mesh=250 microns and 80 mesh=177 microns. Also, particle of 150 microns can be obtained, page 10. JP 07096532 discloses the analogous method for grinding the pellet under cooling temperature. Example 1 at page 10, shows under -60°C .

Both references disclose the analogous chemical formulation of thermoplastic elastomer composition and a method of obtaining powdered polymer material.

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It would have been obvious to one of ordinary skill in the art to modify powder polymer to a particle size of 200 and 350 microns and a fine particle of 150 microns in Sugimoto invention as suggested by JP'532 since both inventions disclose the analogous art under the same process for freezing pulverization of the resulting polymer into a powder form, wherein the pulverizing temperature in the range of from -72 to -88 can be obtained.

Response to Arguments

5. Applicant's arguments filed May 10, 2006 have been fully considered but they are not persuasive. The argument is that Sugimoto does not disclose the powder having an average particle diameter of from 200 to 350 microns, and a content of powder having a particle diameter of not more than 150 microns in the range of not more than 25 wt.% based on 100 % by weight of powder. The particle size of the resulting polymer powder is 500 micron in Sugimoto invention. Also, other argument is that Sugimoto discloses cooling the granule to -120 C., whereas the present claim 5 requires pulverization at a temperature of from -72 to -88 C.

6. Depending on the method of using the resulting polymer powder for making an article, the powder can have the desired particle size. Sugimoto discloses different method such as a fluidization dip method, an electrostatic coating method, a powder spray method, a powder rotation molding method, a powder slush molding method and the like, col. 9, lines 11-14. Also, the size of powder or pellet particle is depending on the desired thickness of the molded article, col. 9, lines 37-38. Therefore, it is prima facie case of obviousness to pulverize the cooled granule to the desired powder particle

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size for obtaining the desired article since a method of using the powdered polymer article is not critical in Sugimoto invention as well as in the present claims, and since the secondary reference to JP'532 is teaching powder polymer having the claimed polymer particle size.

The argument about pulverization the cooled granule at a temperature of from -72 to -88 C in the present claim 5 is also not persuasive. Applicants argue that Sugimoto discloses pulverization at -120 C., and JP 07096532 discloses a pulverization process condition at -60 C. A temperature of pulverizing the polymer granule for obtaining the desired polymer particle size is depending on the chemical formulation of said polymer granule. Sugimoto and JP 07096532 disclose analogous thermoplastic elastomer composition. It is reasonable to presume that the claimed pulverizing the cooled pellet in a mill having an inner temperature of from -72 to -88 C can be applied to the thermoplastic elastomer composition in Sugimoto and JP 07096532 inventions since the chemical formulation for a powder molding material in each cited reference is readable in the present claims.

Applicants are referring to the present specification as evidence that the pulverization temperature in Sugimoto and JP'532 will have negative effect on the characteristics of the final resulting powder molding material. However, the present claims are open to any thermoplastic resin and/or thermoplastic elastomer. Case law holds that while the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ 2d 1057

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(Fed.Cir. 1993). The thermoplastic elastomer composition in Sugimoto and JP 07096532 are readable in the present claims.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

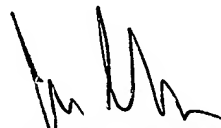
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is 571-272-1066. The examiner can normally be reached on 9:00 to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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